

## COASTAL CONSERVANCY

Staff Recommendation

August 5, 2010

### OCEAN DISCOVERY INSTITUTE LIVING LAB

Project No. 10-007-01

Project Manager: Christopher Kroll

**RECOMMENDED ACTION:** Authorization to disburse up to \$250,000 to the Ocean Discovery Institute for final design, engineering, and pre-construction planning related to the construction of the Living Lab environmental education center in the City of San Diego.

**LOCATION:** Manzanita Canyon, City Heights, San Diego, San Diego County

**PROGRAM CATEGORY:** Coastal and Marine Resources

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#### **EXHIBITS**

Exhibit 1: [Project Location and Site Map](#)

Exhibit 2: [City Heights Schoolshed](#)

Exhibit 3: [Living Lab Photos](#)

Exhibit 4: [Aerial View of Site](#)

Exhibit 5: [Project Letters](#)

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#### **RESOLUTION AND FINDINGS:**

“The State Coastal Conservancy hereby authorizes disbursement of an amount not to exceed two hundred fifty thousand dollars (\$250,000) to the Ocean Discovery Institute for final design, engineering, and pre-construction planning related to the construction of the Living Lab, an environmental education center. Prior to disbursement of Conservancy funds, Ocean Discovery Institute shall submit for the review and written approval of the Conservancy’s Executive Officer:

1. A detailed work program, including budget and schedule.
2. The names and qualifications of any contractors to be employed on the project.
3. A sign plan to acknowledge Conservancy funding for the project.
4. A monitoring and evaluation component for the project.
5. Evidence of land tenure adequate to construct the project.”

Staff further recommends that the Conservancy adopt the following findings:

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“Based on the accompanying staff report and attached exhibits, the State Coastal Conservancy hereby finds that:

1. The proposed project is consistent with the current Project Selection Criteria and Guidelines.
2. The proposed authorization is consistent with Chapter 5.5 of Division 21 of the Public Resources Code, regarding the protection of coastal and marine resources.
3. Ocean Discovery Institute is a nonprofit organization existing under Section 501(c)(3) of the U.S. Internal Revenue Code, and whose purposes are consistent with Division 21 of the Public Resources Code.”

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### **PROJECT SUMMARY:**

Staff is recommending that the Conservancy authorize a grant of up to \$250,000 to the Ocean Discovery Institute (“Ocean Discovery”) for final design, engineering, and pre-construction planning related to the construction of the Living Lab. The Living Lab will be an 8,000 square foot environmental educational center in the City Heights neighborhood of San Diego that will be the headquarters for Ocean Discovery’s ongoing education, scientific research, and environmental stewardship programs.

The Ocean Discovery Institute was created 10 years ago with the vision of using San Diego’s natural environments as a means to engage young people from underserved communities and inspire them to become part of the next generation of scientific and environmental leaders. Ocean Discovery has focused its programs on the City Heights neighborhood, north east of downtown San Diego (Exhibit 1). Ocean Discovery oversees a series of initiatives that incorporate education, scientific research, and environmental stewardship. Currently these initiatives reach more than 4,500 low-income students and community members each year. All of Ocean Discovery’s programming is provided tuition-free. By 2013 Ocean Discovery expects to expand its programs to reach more than 20,000 youth per year by working with all 13 public schools in City Heights and by significantly expanding its programming for neighborhood families. The Living Lab is part of Ocean Discovery’s plan to reach that goal.

Ocean Discovery runs a number of tuition-free programs to engage youth in science. The Ocean Science Explorers is a school-based educational initiative for students and teachers from the third through sixth grades. All curricula are grade level specific and aligned with national and California state science standards. Over the course of two months, students participate in hands-on science education activities, a field exploration of an outdoor laboratory, and a locally-based environmental service project. Evaluations of Ocean Science Explorers show that students increase their scores on tests of science knowledge at every grade level by 20% or more. The Ocean Leaders Program is a series of interconnected after-school and summer programs and support services for middle school, high school and college age youth. This initiative offers a pathway for underrepresented students to progress from secondary school through college to science and conservation careers. Evaluations of Ocean Leaders have demonstrated that participants see increased scores on objective tests of science and environmental awareness by an average of 49%. Participants are also far more likely to attend four-year universities, 90% as compared with less than 17% of students from the same high schools.

Finally, Ocean Discovery has engaged more than 14,000 community volunteers in hands-on environmental stewardship projects. Six canyons, located within City Heights, provide open space in this park-poor inner city neighborhood and also act as educational tools to introduce science and environmental stewardship to the area's children in their own community. The programs develop awareness of the canyons' natural setting and connection to the larger watershed and the ocean. Environmental restoration projects help improve the habitat values of the canyons and increase the open space area available to the community through the development of new trails through the canyons. These projects are helping transform the canyons from dangerous places to be avoided or ignored to highly valued and used natural places at the center of the community.

The Living Lab will allow Ocean Discovery to expand its programs to serve a much larger population of youth from the City Heights neighborhood of San Diego and the greater public (Exhibit 2). The Living Lab will be designed as a regional center and is intended to host over 20,000 students and other visitors each year in ocean science education, scientific research, and environmental stewardship. In addition, the Living Lab will be open to the public and is expected to attract visitors from across the region (Exhibit 3). And consistent with the goal of improving the habitat values of the City Heights' canyons, Ocean Discovery intends to restore native plant communities on the project site itself.

The recommended authorization would provide funds to Ocean Discovery for design and engineering, permits, CEQA compliance, and public outreach. Private donations of over \$100,000 have already been secured to complete the pre-construction work. As discussed below, the total project budget for the Living Lab is \$10,000,000 and consists of \$6,500,000, including pre-construction costs, for acquisition and construction and \$3,500,000 to create an endowment to ensure sustained maintenance and operation of the facility. Ocean Discovery has already secured \$250,000 from the City of San Diego for the acquisition of one of the two properties needed for the project site and anticipates receiving additional funds from the City next year to acquire the second property. One of the properties is currently in escrow and Ocean Discovery has an option to purchase the second property. Escrow on the first property will close in August 2010 and Ocean Discovery intends to purchase the second property in June 2011. Although it is expected that both properties will be acquired for the project, Ocean Discovery has indicated that the Living Lab could be constructed even if only one of the properties is purchased. As neither property has been acquired as of the writing of this report, staff is recommending that Ocean Discovery must demonstrate evidence of land tenure adequate to construct the facility before work on a Conservancy-funded portion of the project can commence. Ocean Discovery will initiate a capital campaign this fall to raise the remaining needed funds.

**Site Description:** The project site is located adjacent to Manzanita Canyon in the City Heights neighborhood of the City of San Diego (Exhibit 4). City Heights is located in the Chollas Creek subwatershed of the Pueblo San Diego watershed which drains to San Diego Bay. It is one of the more densely populated areas of the City of San Diego with a population of nearly 80,000. It is also one of the most diverse neighborhoods in the city with over 30 languages spoken. The community is predominantly low-income (38% of the population is living below the poverty line) and more than 99% of neighborhood children are eligible for federal free lunch programs.

Manzanita Canyon is a 30-acre degraded urban canyon that is plagued by illegal dumping, invasive non-native vegetation, storm water pollution, erosion, and fires. A portion of the canyon has been designated by the City as open space and is included in the Multiple Species Conservation Program (“MSCP”). The MSCP is a program of the County of San Diego to maintain and enhance biological diversity in the region and protect endangered, threatened, and key sensitive species and their habitats. The canyon supports coastal sage scrub and riparian habitat.

The project site is located on two residential lots across the street from an elementary school and three other schools are located within half a mile of the property.

**Project History:** Ocean Discovery Institute staff, board members and students developed a vision plan for the Living Lab in 2007. Since that time, Ocean Discovery has located a project site, investigated existing models for the facility, met with residents of the neighborhood adjoining the project site, developed conceptual designs, initiated a capital campaign to raise funds for construction of the Living Lab, and secured \$600,000 towards that goal.

As discussed above, Ocean Discovery has been running its programs in San Diego for more than a decade. In 2002, the Conservancy provided a \$33,000 grant to support Ocean Discovery’s environmental education programs. The proposed project would be the first major capital project, related to Ocean Discovery’s programs, supported by the Conservancy.

## PROJECT FINANCING

### Pre-Construction Costs

<b>Coastal Conservancy</b>	\$250,000
<b>Individual Donors</b>	<u>\$101,432</u>
	\$351,432

### Pre- Construction Budget

Design and Engineering	\$182,432
Bid Packages	\$ 72,000
Permits and Zoning	\$ 50,000
CEQA	\$ 26,000
Project Administration	\$ 9,500
Hazard/Liability Insurance	\$ 7,500
Public Meetings and Focus Groups	<u>\$ 4,000</u>
	\$351,432

### Project Budget

Acquisition	\$600,000
Pre-Construction Costs	351,432
Construction	4,888,109
Endowment	3,500,000
Contingency	<u>660,459</u>

<b>Total Project Cost</b>	<b>\$10,000,000</b>
Amount raised to date	\$250,000 (San Diego)
	<u>350,000 (Donors)</u>
	\$600,000
Balance to be raised by December 2013.	

The expected source for the Conservancy funds for this project is an appropriation to the Conservancy in fiscal year 2008-09 from the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006 (Proposition 84). Proposition 84 authorizes the use of bond funds for projects that promote access to and enjoyment of coastal resources (Public Resources Code Section 75060). This funding source may be used for the protection of San Diego Bay and adjacent watersheds (Section 75060(f)). Public Resources Code Section 75072.6 states that the term "San Diego Bay and adjacent watersheds" includes "the coastal and bay watersheds within San Diego County." The Pueblo San Diego watershed drains to San Diego Bay. Proposition 84 defines the term "protection" to include actions necessary to allow continued use and enjoyment of natural resources, including development (Section 75005(m)). As discussed in the project summary, the Conservancy's grant would fund pre-construction costs for the development of a marine environmental education center that will improve the regional community's understanding and enjoyment of natural resources. Thus, consistent with the purposes of this funding source, the proposed project would be funded by the Coastal Conservancy pursuant to Division 21 of the Public Resources Code to promote access to and enjoyment of the coastal resources of the state.

If the Coastal Conservancy's grant is authorized, Ocean Discovery will have raised \$850,000 toward the total project budget of \$10,000,000. Ocean Discovery has a long history of successful fundraising and they have developed a detailed fundraising plan for this project. In addition, Ocean Discovery has applied for several government grants for this project. Overall, Ocean Discovery anticipates that about 58% of the funding will come from private and corporate donations and 42% from government grants (local, state and federal). Ocean Discovery expects to raise \$100,000 for the project from the local community in City Heights.

#### **CONSISTENCY WITH CONSERVANCY'S ENABLING LEGISLATION:**

The proposed project will be undertaken pursuant to Chapter 5.5 of Division 21 of the Public Resources Code (Sections 31220) relating to the protection of coastal and marine resources. This project is consistent with Public Resources Code Section 31220(b)(9), which allows the Conservancy to provide grants for the construction or expansion of nature centers or research facilities that emphasize conservation education or research activities focusing on the marine portion of the coastal zone or the land and ocean interface. Ocean Discovery Institute is a 501(c)(3) nonprofit organization that is developing the Living Lab as a regional center to educate visitors about the nature of urban watersheds and their interface with the coastal and marine environment. The educational curriculum of the center will focus on ocean science education, scientific research, and environmental stewardship. Finally, as required by subsection (c) of Section 31220, as a condition of grant funding, Ocean Discovery Institute will be required to develop a monitoring and evaluation component for the project. This monitoring and evaluation

component will be incorporated into the work program required by the grant agreement. Subsection (c) also requires compliance with various water-related plans, where those plans are relevant and available. See below for that discussion.

**CONSISTENCY WITH CONSERVANCY'S 2007  
STRATEGIC PLAN GOAL(S) & OBJECTIVE(S):**

Consistent with **Goal 3, Objective 3C** of the Conservancy's 2007 Strategic Plan, the proposed project will support the planning and design of an environmental education center that will emphasize coastal, watershed, and ocean resource education.

Consistent with **Goal 3, Objective 3D** of the Conservancy's 2007 Strategic Plan, the proposed project will increase education of the public about environmental issues affecting the coast and inland watersheds by constructing a regional environmental education center.

**CONSISTENCY WITH CONSERVANCY'S  
PROJECT SELECTION CRITERIA & GUIDELINES:**

The proposed project is consistent with the Conservancy's Project Selection Criteria and Guidelines, last updated on June 4, 2009, in the following respects:

**Required Criteria**

1. **Promotion of the Conservancy's statutory programs and purposes:** See the "Consistency with Conservancy's Enabling Legislation" section above.
2. **Consistency with purposes of the funding source:** See the "Project Financing" section above.
3. **Support from the public:** The proposed project is strongly supported by the local community surrounding the project site, community groups, and elected officials. Additionally, individual donors have already given \$350,000 for the project. Project letters are included in Exhibit 5.
4. **Location:** The proposed project is located in the Chollas Creek watershed, a subwatershed of the Pueblo San Diego watershed. The Pueblo San Diego watershed is a coastal watershed partly within and partly outside the coastal zone. The Living Lab, though not located in the coastal zone, will provide environmental education and scientific research that will benefit coastal and ocean resources and focus on the land and ocean interface.
5. **Need:** Ocean Discovery Institute has secured funding from private donors and the City of San Diego for land acquisition and pre-construction planning but is still short of the funds needed to complete the planning and design. Approval of this funding request would fill that funding gap and leverage additional funding from private sources.
6. **Greater-than-local interest:** The Living Lab will be designed as a regional center and is intended to host over 20,000 students and members of the general public in ocean science education, scientific research, and environmental stewardship. Visitors and program participants will come from local underserved communities and from the larger region.

7. **Sea level rise vulnerability:** The proposed project will be located at the top of a canyon three miles inland of San Diego Bay in an area not considered vulnerable to future sea level rise.

**Additional Criteria**

10. **Leverage:** Conservancy funding will leverage both local government and private funding already secured for the project.
12. **Innovation:** The design concept of the Living Lab uses the four basic elements of a watershed (biosphere, lithosphere, hydrosphere, and atmosphere) to guide the form and function of the building. The building will represent a metaphorical model of the watershed intended to develop in visitors a sense of place and connectivity to the ocean and the region. The design is intended to meet the Green Building Council's Living Building Challenge 2.0 certification and will demonstrate how sustainable design can be replicated in homes and work places.
13. **Readiness:** Ocean Discovery Institute has: 1) secured a property for the project, 2) secured local and regional support for the project, 3) developed a design concept and conceptual drawings, 4) completed a positive capital campaign feasibility study, and 5) established a capital campaign planning committee that has already raised \$600,000 and is now preparing a campaign strategy to raise funds for construction and an endowment for the facility.
16. **Cooperation:** Both public and private sector entities and individuals have already contributed financially to the project and many people are donating their time to serve on either the capital campaign planning committee or the construction and design committee.
17. **Vulnerability from climate change impacts other than sea level rise:** The project site may be vulnerable to climate change impacts including the heat island effect, increased fire risk, and habitat loss. The project will reduce these risks by creating and restoring native habitat on the project site. Increased areas of native habitat can decrease heat and fire risk and improve biodiversity.
18. **Minimization of greenhouse gas emissions:** The project will incorporate project design elements, construction techniques, and maintenance practices to reduce greenhouse gas emissions. For example, the Living Lab will utilize natural daylight and ventilation, solar panels, green roofs, greywater treatment systems, rainwater collection systems, and composting. In addition, the project will strive to use local materials and labor during construction. The project will minimize car trips to the site as it is located within a densely populated community, within walking distance of 12 public schools and accessible by public transportation.

**CONSISTENCY WITH LOCAL WATERSHED MANAGEMENT PLAN/  
STATE WATER QUALITY CONTROL PLAN:**

Projects undertaken pursuant to Chapter 5.5 of Public Resources Code Division 21 (Section 31220) must be consistent with the following, if available and relevant: Integrated Watershed Management Programs; local watershed management plans, and water quality control plans, adopted by the state and regional water boards. The San Diego Water Quality Control Board's

Basin Plan was completed in 1994 and includes designated beneficial uses for specific inland surface waters, including Chollas Creek. Beneficial uses are one of the bases of water quality protection under the Basin Plan as water quality objectives are established in response to the designation of beneficial uses. Two of the designated beneficial uses for Chollas Creek are 1) warm freshwater habitat (preservation or enhancement of aquatic habitats, vegetation, fish or wildlife) and 2) wildlife habitat (preservation and enhancement of terrestrial habitats, vegetation, wildlife or wildlife water and food sources). The proposed project is consistent with the goals of the Basin Plan to enhance aquatic and terrestrial habitats by planning for the removal of non-native vegetation from the project site and revegetating the area with appropriate native plant species. In addition, the facility will be designed and constructed to minimize impacts to Manzanita Canyon by capturing all run off on-site.

The Chollas Creek Enhancement Program was adopted by the City of San Diego on April 30, 2002 and has the following design/development guidelines that are applicable to this project:

Interpretive Centers

Interpretive Centers should be constructed intermittently along the creek...

Educational Resources

In order to foster a relationship between Chollas Creek and surrounding schools, a number of educational resources should be constructed along the creek. These should be planned in conjunction with school sites located near the creek.

Educational Facilities

The creation of hands-on learning opportunities is something which is widely needed along the creek corridor. Facilities such as science laboratories and water quality monitoring stations, would allow teachers to bring their students to the creek for firsthand educational experiences.

Vegetate Upland Areas to Complement Creek Habitat

Upland vegetation areas outside the creek bed should be designed to supplement creek bed vegetation and present an enhanced park-like entry into the creek bed...

Maintain Natural Drainage Patterns

Natural drainage should be maintained by: preserving slopes and soil elevation to maintain natural runoff patterns; maintaining soil composition that allows natural water filtration; and carefully assessing appropriate ground cover and new soil import to assure that the natural runoff and drainage patterns are not changed.

Maintain and Enhance Water Quality

Maintain and enhance the creek's filtering function, if at all possible, by maintaining natural soils. If grading is necessary, replace with new soils and ground cover that will maintain and enhance the water quality. Sandy soils, porous soils, and plant materials that provide cleansing action should be used to restore disturbed areas.

Control Erosion



Prior to any grading or changes in topography, an analysis should be made of erosion-related issues through an evaluation of new soils or surfaces applied, projected water velocity, vegetation impacts on the slowing down of water, and siltation conditions. Water deceleration structures and erosion control structures may need to be considered where high erosion levels are identified.

The proposed project will be an environmental education center consistent with the guidelines regarding interpretive centers, educational resources and educational facilities. The proposed project will remove non-native vegetation and plant appropriate native vegetation on the project site consistent with the upland areas guideline. In addition, the design of the Living Lab will incorporate best management practices to ensure that natural drainage patterns and water quality are maintained (and enhanced, if possible) and no erosion problems are created as a result of the project.

**COMPLIANCE WITH CEQA:**

The proposed project is statutorily exempt from the provisions of CEQA under 14 Cal. Code of Regulations Section 15262 in that it involves planning for possible future actions, which the Conservancy has not approved, adopted, or funded. Staff will file a Notice of Exemption upon approval of the proposed authorization.